

PATENT

Our Docket: P-TB 456

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of )  
Daniel S. Sem )

Serial No: 09/765,696 )

Filed: January 19, 2001 )

For: MULTI-PARTITE LIGANDS )  
AND METHODS OF )  
IDENTIFYING AND USING )  
SAME )

Group Art Unit: 1627

Examiner: M. Garcia

I hereby certify that this correspondence is being hand delivered to the Customer Service Window of the United States Patent and Trademark Office located in Room 1B03, Crystal Plaza 2, 2001 South Clark Place, Arlington, Virginia on August 30, 2001.

Commissioner for Patents  
Washington, D.C. 20231

By: Kimberly J. Prior  
Kimberly J. Prior Reg. No. 41,483

August 30, 2001  
Date of Signature

RESPONSE TO RESTRICTION REQUIREMENT

Responsive to the restriction requirement mailed July 31, 2001, consideration of the following remarks is respectfully requested.

Claims 1-14 are under examination and have been restricted under 35 U.S.C. § 121 into the following groups:

- Group I: Claims 1-8, directed to a method for generating a library of bi-ligands;
- Group II: Claims 9-14, directed to a method for identifying a population of bi-ligands.

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Although the restriction requirement is traversed for the reasons set forth below, Applicant elects the claims of Group II, claims 9-14, for examination.

The restriction requirement is traversed for the following reasons. While the claims of Groups I and II are patentably distinct, it is submitted that a thorough search of the claims of either group will likely reveal art relevant to the examination of the claims of the other group. This is further indicated by the classification of the claims of Group I and II related subclasses in the same class (Class 435). It is noted that subclass 7.1 is subordinate to subclass 4. Subclass 4 relates to processes involving enzymes, while subclass 7.1 relates to processes involving enzymes and ligand-receptor binding. The claims of Group I, indicated as classified in subclass 7.1, recite screening and identifying a bi-ligand that binds a receptor. Receptor is defined in the specification, at page 11, lines 6-13, to include enzymes. Therefore, a search of Group I would require a search of Class 435, subclass 4. Additionally, the claims of Group II, indicated as classified in subclass 4, recite generating a population of bi-ligands to receptors in a receptor family. Therefore, a search of the claims of Group II would require a search of Class 435, subclass 7.1.

Thus, a search of the claims of Group II will, of necessity, be duplicative of the search for Group I and would reveal information relevant to the examination of the claims of Group I. Therefore, examination of the claims of Group II with

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the claims of Group I should not be an undue burden on the Examiner. For at least these reasons, applicant requests reconsideration and withdrawal of the restriction requirement.

Claims 1-14 have also been restricted under 35 U.S.C. § 121 into the following species:

Species of receptor

- A. Kinase
- B. Dehydrogenase
- C. Oxidoreductase
- D. GTPase
- E. Carboxyl transferase
- F. Acyl transferase
- G. Decarboxylase
- H. Transaminase
- I. Racemase
- J. Methyl transferase
- K. Formyl transferase
- L.  $\alpha$ -ketodecarboxylase

Species of cofactor

- A. Adenosine triphosphate
- B. Nicotinamide adenine dinucleotide
- C. Nicotinamide adenine dinucleotide phosphate
- D. Thiamine pyrophosphate
- E. Flavin adenine dinucleotide
- F. Flavin mononucleotide
- G. Pyridoxal phosphate

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- H. Coenzyme A
- I. Tetrahydrofolate adenosine triphosphate
- J. Guanosine triphosphate
- K. S-adenosyl methionine

The Office Action requires that one species from each of these two groups be elected for examination. Applicant elects the species of receptor as dehydrogenase and the species of cofactor as nicotinamide adenine dinucleotide.

The Office Action states that the species are distinct, each from the other, because their structures, modes of action, and reactivity to one another and to certain cofactors and enzymes are different. Applicant requests that the species nicotinamide adenine dinucleotide phosphate (NADP) be examined with the elected species, NAD. These two compounds have similar structure and function. Additionally, many enzymes bind and use these compounds interchangeably. Therefore, these two species should be searched and examined together.

Further, applicant understands that the election of a single disclosed species is a provisional election and that if no prior art is found which anticipates or renders obvious the elected species, search of the claims will be extended to the extent necessary to determine patentability of the generic claims.

The Office Action also requests that all claims readable on the elected species be indicated. It is respectfully

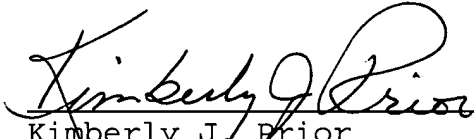
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submitted that the claims readable on the receptor species dehydrogenase are claims 1-14. The claims readable on the cofactor species nicotinamide adenine dinucleotide are claims 1-14.

The Examiner is invited to call the undersigned attorney or Cathryn Campbell if there are any questions.

Respectfully submitted,

August 30, 2001  
Date

  
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